State CIO
Agency IT Plans
2009 – 2011 Biennium

Department of Transportation
IT Plan

October 2008

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Executive Summary

Message from the Chief Information Officer

To be effective, IT strategic planning requires an alignment with, and understanding of, the agency's primary mission and business requirements. Information Technology, within any organization or agency, should be a tool utilized by the organization to achieve its goals and objectives. As a result, the IT Strategic Plan should be in concert with the organization's Strategic Plan and Goals.

In 2008, NCDOT initiated several changes of significance, for both the agency, as well as for the NCDOT IT organization:

- Creation of the **Strategic Management Committee (SMC)** to oversee and prioritize business technology initiatives, and the
- Creation of the **Strategic Planning Office for Transportation (SPOT)** to set strategic directions for the agency.

As these newly formed bodies mature, and the resultant processes become solidified, NCDOT IT expects that technology initiatives our stakeholders ask of us will become increasingly aligned with the goals and objectives of the agency.

SPIRIT

NCDOT Information Technology (IT) is a service organization. Without our customers and stakeholders, there is no reason for us to exist. That is one key reason I initiated the **Service and Process Improvement by Re-engineering Information Technology**, or (SPIRIT) program.

SPIRIT is our implementation of the *ITIL*®[1] best practices for IT Service Management. By implementing these practices, NCDOT IT will be able to improve its ability to deliver key technology services in an efficient, repeatable, and consistent fashion. In the spring of 2007, we initiated Phase I of SPIRIT, which included the implementation of these four (4) processes: Incident Management, Problem Management, Change Management, and Service Level Management. Along with these four processes, DOT is working with ITS to implement Remedy as our Service Management tool. Remedy will be implemented November 2008, which will mark the completion of the SPIRIT program.

This effort will continue as we roll out the rest of IT Service Management. NCDOT IT has trained more than 200 of our employees in ITIL foundation training, along with nearly four dozen that have attended practitioner training, plus one that has attended service manager training. Our employees have been extremely successful in this effort, and we definitely want to continue that good work.

NCDOT business depends on IT Services, Applications, and the IT Infrastructure to deliver services to North Carolina citizens. It is vital that the services we provide

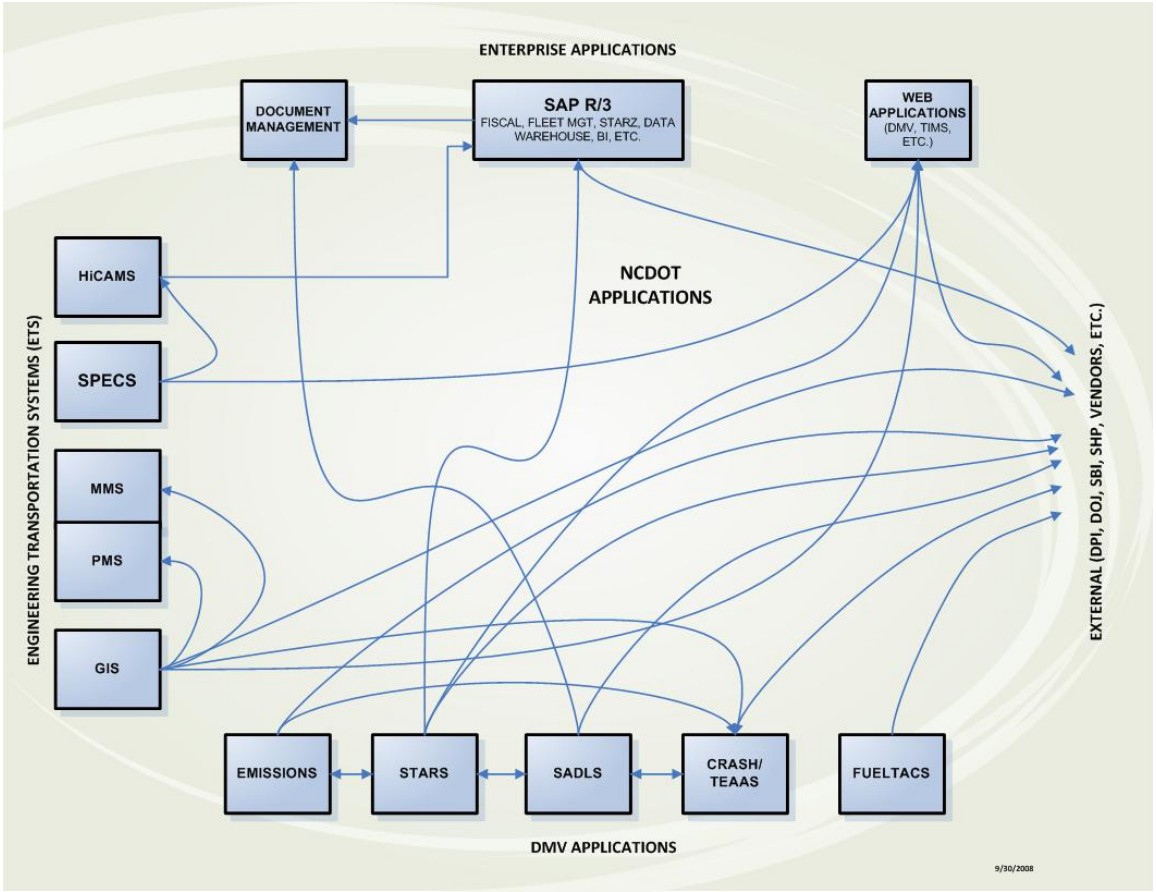
[1] Information Technology Infrastructure Library (ITIL) is a registered to Office of Government Commerce.

continue to meet the current and future needs of the business. Our SPIRIT program is a key strategic part of our approach to provide quality in IT service.

NCDOT Application Portfolio

NCDOT has well over 220 active business applications in a complex mix of technologies. The high-level overview (below) demonstrates some of the major applications and shows the complexity of interfaces that exist within our environment. As NCDOT IT continues to do business, these general guidelines provide direction for our organization:

- NCDOT IT will strive to enable and provide strategic value to the business
- NCDOT IT will strive to ensure integrity, planned evolution, and economical currency with respect to new technologies
- Inasmuch as data is one of our most valuable assets, NCDOT will strive to protect it, manage it, make it accessible to those authorized
- Given that time has created a complex application portfolio for NCDOT IT to manage, as new applications are developed, or deployed, we will strive to simplify this portfolio, seek economical support and maintainability, and facilitate reuse wherever possible



Department of Transportation Strategic Business Initiatives and Major Business Requirements

The Department of Transportation (DOT) is one of North Carolina's largest State agencies. It has over 14,000 employees that support the transportation infrastructure, including roads, bridges, rail, ferries, aviation, as well as motor vehicle functions. The Department also provides funding to local municipalities for public transportation and enhancement projects. DOT could be considered a Fortune 500 company that spends nearly $3B a year, broken down into $1B for road construction, $1B for road maintenance, and $1B on other types of services to the citizens and motoring public that travel through the state.

The **Transformation Management Team** (TMT) identified five key transformation initiatives that will make NCDOT successful in the 21st Century:

1. Strategic Direction
    a. Define common ***Mission*** and ***Goals*** for NCDOT
    b. Evaluate possible ***organizational changes*** to reach strategic goals
2. Planning and Prioritization
    a. Establish a ***Strategic Planning Office***
    b. Develop ***strategic plan*** that aligns with Mission and Goals
    c. Establish a new ***prioritization approach*** based on strategic priorities
3. Program and Project Delivery
    a. Develop and implement enhanced ***program and project delivery*** models and processes
4. Performance and Accountability
    a. Implement a public facing ***Executive Dashboard*** that is aligned with the mission and goals
    b. Introduction of a ***performance based culture*** that cascades performance metrics throughout the organization
5. Improved Human Resource Management
    a. Design a ***rigorous performance review*** process tied to performance metrics
    b. Make high level recommendations on ***employee recruitment, development and retention***

The Transformation Management Team has completed several of the activities listed:

- New NCDOT Mission and Goals have been defined (see Appendix A).
- On August 14, 2008, Secretary Tippett announced the NCDOT re-alignment, which re-organized the Department in effort to achieve the strategic goals
- The **Strategic Planning Office for Transportation** (SPOT) was created in January 2008.
- The NCDOT Executive Dashboard has been developed and is reporting DOT's progress toward meeting strategic goals.

- TMT has implemented the Personal Dashboard and Appraisal (PDA), which embodies the new performance-based culture.

Although the TMT has not been able to complete all the initiatives listed above, the DOT re-alignment has laid the foundation for continuous improvement.

Information Technology Contribution to Business Success

NCDOT Information Technology (IT) has always been a customer service organization; without customers, IT would not exist. Hence, in the fall of 2006, IT initiated a program to improve and formalize IT Service Management. IT Service Management (ITSM) has three (3) important goals:

1. Provide high quality, reliable and cost-effective services
2. Adopt a Continuous Improvement approach to IT service quality
3. Ensure that IT Services meet the current and evolving needs of the business

IT Service Management will be accomplished via the adoption of the *ITIL* best practices though the SPIRIT[2] program. *ITIL* is a non-proprietary framework known as the *de facto* standard for ITSM. To simplify our adoption of *ITIL*, and for consistency, IT works closely with the Office of Information Technology Services (ITS) and their Operational Excellences Program (OEP).

SPIRIT has defined both Critical Success Factors (CSFs) and Key Performance Indicators (KPIs) and will report them through an IT Executive Dashboard and through Service Level reviews with customers.

Along with SPIRIT, IT has initiated several other key projects in support of the Department's Mission and Goals:

- Make our transportation network SAFER
  - Centralized (Driver License) Issuance Lite
- Make our transportation network MORE EFFICIENT
  - NCSmartLink
  - MMS Field Data Capture
  - Attribute Road Inventory Database (ARID)
- Make our infrastructure LAST LONGER
  - MMS Field Data Capture
- Make our organization a place that WORKS WELL
  - ERP 2006 Upgrade
  - Service and Process Improvement by Re-engineering IT (SPIRIT)
  - HB 1779 – Statewide Situs Address / Tax Jurisdiction Database
- Make our organization a GREAT PLACE to work
  - Service and Process Improvement by Re-engineering IT (SPIRIT)
  - Wireless Access Implementation

[2] SPIRIT stands for Service and Process Improvement by Re-engineering Information Technology

Central (Driver License) Issuance Lite

Summary description	PPM ID: DOT08113 Agency ID: ITP.00152
Problem or opportunity to be addressed	To comply with North Carolina General Statute 20-7(f)5 North Carolina is required to implement a central issuance functionality by July 1st, 2008, which will change the way drivers licenses and IDs are issued. Currently, DMV customers complete an application, possibly take a written test, eye exam and road test, then get issued a drivers license or ID immediately. With the new approach, the DMV will issue a temporary license good for 20 days. During the 20 day period, the DMV will perform identity and document verification processes to ensure privileges are extended to the right individuals. In addition, the contract with the vendor currently providing Card Production services expires June 30th. • This project will then serve the dual purposes of: A . Providing the structure and oversight to pilot and rollout the functionality necessary to comply with the General Statute, B. Providing the business justification and framework under which the vendor contract can be extended to meet the division's statutory and business needs.
Major objectives	Deputy Commissioner Wayne Hurder is the project sponsor for this effort. The beneficiaries will be the DMV and North Carolina Citizens. The Major business goals therefore are: 1. Central Print Functionality - Afford DMV the ability to centrally produce and print drivers licenses and IDs in support of state/federal legislative mandates, national security frameworks and international system standards 2. Temporary Drivers License – Valid for 20 days while document and identification verification is conducted. 3. Ability to perform document and identity verification - Facilitate a means for DMV to fulfill background checks and document verification to reduce fraud, terrorist threats, identity theft and repeat offenders 4. Issuance of Drivers Licenses after document and identity verification 5. Ability to monitor central print card production status for customer support purposes - Allow DMV headquarters personnel the ability to monitor centralized card production and intervene accordingly. Additional objectives of this project will be to provide the necessary infrastructure, technical services and DOT-IT functionality to support Centralized Issuance. • Set up an internal process and structure that enables DOT-IT the ability to test stage, image and distribute vendor software changes. • Improve the security with which the vendor inter-operates with DOT-IT and DMV by accomplishing the following: 1. Isolated vendor network segment 2. VPN access to vendor owned and operated Image and Print servers instead of direct network access. 3. No administrative access to field workstations" & "no remote access to field workstations from outside DOT network 4. Layer vendor software build on DOT-IT image and execute DOT-IT QC process • Creation of a secondary, disaster recovery site – the location of this site has yet to be determined. This facility may be a branch office in which case wiring and networking requirements may not exist. The site will house a configuration that is approximately half the capacity of the primary site. • Execution of contract extension with Viisage LLC.
Approach	Develop work plans and preliminary timelines for NC DOT-IT Technical Services, Infrastructure, ITS and Drivers License Systems development efforts. Work with the vendor to develop its project schedule. • Establish a pilot site to test the new functionality • Incremental rollout – Upon successful completion of the pilot, rollout the functionality to all branches across the state at a rate of approximately 2 branches per day based on geographic location – the estimated timeframe to complete this rollout is between 60 and 90 days – as noted, this rollout will be

	accomplished by the vendor. Procure the services of Viisage LLC to provide: 1.Central Print Functionality - Afford DMV the ability to centrally produce and print drivers licenses and IDs in support of state/federal legislative mandates, national security frameworks and international system standards 2. Temporary Drivers License – Valid for 20 days while document and identification verification is conducted. 3. Issuance of Drivers Licenses after document and identity verification 4. Ability to monitor central print card production status for customer support 5. Pilot the functionality on a limited basis then implement incremental rollout to consist of two offices per day over the course of approximately 60 to 90 days after successful pilot. 6. The Vendor will be responsible for installing all hardware in both the primary and secondary central print locations as well as all of the printers, image masts, frame grabbers and workstations to the field. Procure the Services of DOT-IT and DOT Enterprise Operations to provide. 1. VPN access from Central Print Server to Central Image Server for primary and secondary sites. 2. DOT-IT Enterprise Operations will be responsible for imaging and testing the workstations, providing 3. VPN connectivity through ITS, network infrastructure and wiring to both primary and secondary locations in support of the solution. 3. Interface from Viisage Image Server to Drivers License System
Timeframe	Project end date 3/31/2009
Major risks	Ability of vendor to complete its development efforts on time for the pilot and for the full solution • Availability and commitment of DOT-IT technical services and infrastructure resources • Ability to purchase necessary hardware to wire the DMV locations • Timely availability of Card Production Order Status Interface specifications • Timely configuration of Vendor VPN connection to enable deployment • Clear requirements from DOT-IT and the vendor, along with consensus on approach for remote accessibility. • Availability of PC's properly configured to specifications • Adequate testing time. DMV has stated it will require a minimum of 2 weeks.
Relationship to other department programs	NONE
Relationship to Statewide initiatives	NONE
Costs	> $3,000,000

NCSmartLink

Summary description	PPM ID: DOT0649 Agency ID: ITP.00066
Problem or opportunity to be addressed	NC traveling public and commercial industry currently has to access multiple sites to obtain available travel information provided by the State to ease traveling and avoid congestions at critical road junctures.
Major objectives	The overall goal is to purchase and implement a product that provides the public with a Single Point of Contact to provide traffic information to the public in a timely manner without accessing multiple sites. The objective is to provide access to the images of Traffic Camera, Traffic Incident Management System (TIMS) data, Dynamic Message Signs (DMS) data, traffic counter and speed data, Roadside Weather Information Stations (RWIS) data as well as messages available from Highway Advisory Radio (HAR) through one common web site.
Approach	The proposed strategy will be determined after the return of the proposals from the vendors. Major tasks to be performed are investigation of existing network for bandwidth availability, procurement of Servers to run the proposed software, installation of software, input of existing ITS device information to link with each device, and integration with GIS and TIMS databases.
Timeframe	Project end date 2/25/2009
Major risks	Constraints – There is an existing system for Charlotte that provides similar functionality for the Charlotte area (CARAT). This system must not interfere with the functionality of CARAT, but be able to interface with it to get the needed information.
Relationship to other department programs	NONE
Relationship to Statewide initiatives	NONE
Costs	$500,000 - $3,000,000

MMS Field Data Capture

Summary description	PPM ID: DOT0781 Agency ID: ITP.001092
Problem or opportunity to be addressed	Division of Highways (DOH) maintenance crews use paper and pencils to record daily work activities for manpower, equipment, materials, work accomplished and location. There is a lack of control over the data that is captured. Information has to be manually keyed into the Maintenance Management System (MMS) and SAP, a potentially error prone process that requires hundreds of hours of work, each week, by processing/office assistants in the DOH's14 maintenance divisions. • Maintenance engineers need improved quality and efficiency collecting and processing road maintenance source data in a timely and accurate manner. • DOT requires the evolution of excellent historical maintenance information. • DOT requires optimum prioritization and planning of road maintenance activities. DOT should upgrade MMS for use with portable or handheld• computer devices, and the software needed to automate the field data collection of maintenance information by DOT's maintenance employees. The State• Road Maintenance Unit (SRMU) conducted a field test (proof of concept) of the technology needed to address these issues. That project was completed successfully in 2006 and demonstrated the feasibility of the proposed project. DOH Operations management now wishes to proceed with a phased deployment and production implementation to DOT's 14 divisions.
Major objectives	The project sponsor expects the following: The automation of manual data• collection and data entry processes to enhance efficiency and accuracy of the Maintenance Management System – and to reduce the man-hours and time required to process daily work activity information. Maintenance crews will use• portable, handheld, or other remote devices to download daily task / activity information from MMS at the beginning of each work day. Maintenance• crews, during the course of the work day, will enter data (instead of writing paper records) related to hours worked, equipment and materials utilized, work accomplished, and the location of work performed. The location of work• performed will be recorded using the Lat/Long coordinates provided by the Global Positioning System (GPS). These will eventually be automatically correlated with the starting and ending milepost identifiers contained in DOT's Road Inventory Linear Reference System (LRS). Optionally, pavement conditions,• other defects, and corrections may be recorded using digital cameras. • Optionally, the identification of other highway assets (e.g. guard rails, signage, lighting) may be accomplished using bar code technology. • Maintenance crews will be able to enter new tasks and work activity information that is not already scheduled/planned in MMS. For example, an immediate emergency repair, or the handling of a traffic accident. At the end of• the work day, the information captured in the field on the portable devices will be transmitted to MMS for validation, and subsequently transferred to SAP for processing into DOT financials and inventory systems. Information• processed in SAP is then returned with cost information to update MMS completing the historical record and facilitating work planning and priority, and optimizing the expenditure of maintenance funds. Updates to the MMS system• are required to provide the software necessary to operate the computer equipment (implementation services). The existing MMS Maintenance Agreement provides for these services on a time and materials basis. Operations and support• documentation as required. Technical and project management support by DOT• IT, Transportation

	Applications Development, Asset Management staff. Field• business and technical support from the DOH, Operations, State Road Maintenance Unit (existing contractor resources).
Approach	This project is essentially a computer equipment procurement. There is a relatively small cost for the procurement of COTS software and maintenance related implementation services. Project Management and Oversight – to be provided by DOT IT, Engineering Transportation Systems (ETS), Transportation Applications Development (TAD) staff in the Transportation Assets Management (TAM) area. Hardware Procurement – Coordinated by DOT IT Technical• Services, DOT Procurement and ITS Procurement. Develop a Procurement Plan. • Software Procurement – Coordinated by DOT and ITS Procurement. Deployment• Strategy – Work with State Road Maintenance Unit support staff to define and manage a field deployment strategy, support and training. Support Strategy• – Coordinate with DOT IT Technical Services to document field requirements and a support plan for the hardware devices and other support services.
Timeframe	Project end date 4/30/2009
Major risks	Although NOT critical to success, the MMS application software offers• "services" (APIs) to improve the exchange of data with SAP. The automated exchange of data from MMS to SAP will require BSIP resources to implement these services. It will require a Change Request to BSIP and the implementation is not under control of the project team. The link between the handheld• devices and MMS is made with an Ethernet type connection. The lead time to obtain the "cradles" that make this connection is estimated to be 4-12 weeks, as these are new devices just entering manufacturing. A laboratory beta device has been tested successfully. The external dependencies are not critical to the• success of the project. However, the capabilities will improve the project and are desirable by providing further automation of the process and in utilizing leading edge technology.
Relationship to other department programs	NONE
Relationship to Statewide initiatives	NONE
Costs	$500,000 - $3,000,000

Attribute Road Inventory Database (ARID)

Summary description	PPM ID: DOT08118 Agency ID: ITP.00154
Problem or opportunity to be addressed	The NCDOT GIS Unit has been tasked to meet HPMS (Highway Performance Monitoring System) Reassessment 2010+ requirements by the FHWA (Federal Highway Administration). The HPMS is a national level highway information system that includes data on the extent, condition, performance, use, and operating characteristics of the Nation's highways. The major purpose of the HPMS is to support a data driven decision process within FHWA, the DOT, and the Congress. Beginning next year, the GIS Unit will also be responsible for maintaining NCDOT's Universe and Supplementary File data that has been used in HPMS reporting and other NCDOT business functions, as well as the newly required spatial information for HPMS Reassessment 2010+. The current tool sets, databases, and processes do not allow for the accurate and consistent maintenance of most core road inventory attributes. The ARID project is essential to replacing the outdated Universe mainframe flat file (VSAM) based application. Currently road inventory information is being entered into the Universe through TOAD like terminal application for the mainframe. Conversely, ARID would allow for the entry of road inventory information into the Oracle based solution that not only replaces the Universe but also provides much needed road inventory support heretofore not supported by the Universe. The plan is to have both ARID and the Universe in production, running in parallel, through June of 2009. This will allow for our official and alternate HPMS submittals in 2009, and set the stage for the new mandated submittal in 2010+. It is after this official submittal in June of 2009 that the Universe can be destroyed. This means that starting in July of 2009 a project would be created to bring down the Universe and transfer all related functions to the NCDOT LRS.
Major objectives	The project Attribute Road Inventory Data (ARID) Tool is proposed to develop a set of tools; design and implement a data structure; integrate road inventory attributes with NCDOT Linear Referencing Systems (LRS). This project will also develop processes and procedures by which all of the HPMS Reassessment 2010+ required road inventory attributes will be captured and maintained in an accurate and consistent manner. The goals of this project are • Enable the GIS Unit to maintain the mainframe Universe and Supplementary road inventory data in an NCDOT Oracle database through a set of GIS tools. • Design and implement a data structure supporting the new HPMS submittal requirements. • Improve the support of other business units by integrating road inventory data and other attributes with the LRS. • Retire the mainframe Universe file The primary users who will benefit from the successful implementation of this project include the Information, Mapping and Graphics (IMG) Unit, GIS Unit Data Conversion Group, Pavement Management Unit, Transportation Planning Branch, Traffic Safety Unit, and the divisions that use the Maintenance Management System (MMS). Other NCDOT business units that currently use the mainframe Universe data will also benefit from this project.
Approach	• DOT IT PM Processes o Follow the appropriate documentation and processes for a Tier II project as indicated by NCDOT Project Management Office. • Prototyping the Proposed design ideas o Work with End Users to develop a working prototype for feasibility and direction

	• Integrate ARID Products with ArcGIS Desktop o Design tools to utilize the functionality of ArcGIS software • Deploy ARID Tool and associated databases first and then focus on retiring Universe file
Timeframe	Project end date 8/29/2008
Major risks	Constraints • The project products shall be integrated with Data Conversion's existing process for maintaining the NCDOT LRS Datasets. • NCDOT enterprise Oracle RDBMS shall be used to store the ARID event data. This constraint is a step backwards in Disaster Recovery capabilities for the database. However, the customer accepts the risk of moving the Universe file off of the mainframe with the understanding that a periodical archive will be made after the ARID Tool is in production. Further, we plan to develop, during planning and design, a document for a disaster and recovery plan based on NCDOT's current disaster recovery practice. • Both ARID and the Universe in production, running in parallel, through June of 2009. This will allow for our official and alternate HPMS submittals in 2009, and set the stage for the new mandated submittal in 2010+. It is after this official submittal in June of 2009 that the Universe can be destroyed. This means that starting in July of 2009 a project would be created to bring down the Universe and transfer all related functions to the NCDOT LRS. • In terms of disaster recovery, if a disaster were to occur at the worst possible time for submitting of the HPMS report, FHWA would allow us 60-120 days to recover and submit the report.
Relationship to other department programs	ARID Tools may use the Application Authorization web services for Secondary Road Improvement Program (SIP)
Relationship to Statewide initiatives	NONE
Costs	$100,000 - $500,000

ERP 2006 Upgrade

Summary description	PPM ID: DOT0670 Agency ID: ITP.00093
Problem or opportunity to be addressed	North Carolina Department of Transportation is currently on release 4.6c of SAP R/3. Support packages supplied by SAP to keep up with enhancements, code repairs and known product issues have not been applied since first quarter 2004. The current release will be entering extended support at the end of 2006. A number of modifications exist in the current installation to address specific requirements around federal aid billing and contract accounting. The cost and complexity of maintaining these modifications is increasing, and is not supported by SAP. - The current version of SAP has not had support packages applied for over two years - Mainstream support for the current version ended December 2006, entering extended support with increased cost - A number of customer modifications exist in the current system - New functionality cannot be back-ported to the current release - The statewide Human Capital Management project (BEACON) will be utilizing ERP 2005
Major objectives	North Carolina Department of Transportation desires to have the most current version available to support the growth of its mission and provide the ability to support its future business strategy: - Maximize the use of the SAP software as an information system to provide the basis for financial and operational decision support - Minimize the dependence on external resources and become more self sufficient for production support, upgrades, process improvements and expanded functionality - Streamline complex business processes and reduce workarounds where possible by taking advantage of new functionality - Provide the clients with premier customer service and products to support the mission of the Department of Transportation - Maintain infrastructure to accommodate the technical and functional requirements for new releases and ongoing support packages - Reduce complexity, reduce total cost of ownership, reduce on-going maintenance support cost, and increase efficiency. - Utilize NetWeaver as the basis for offering composite applications to reduce cost and effort associated with integrating external systems
Approach	The upgrade will be accomplished using ASAP Methodology and following SAP guidelines and best practices. Solution Manager will be used to guide and monitor the progress of the project.
Timeframe	Project end date 5/31/2009
Major risks	It will be necessary to coordinate resources, scheduling, and design with the BEACON Project
Relationship to other department programs	NONE
Relationship to Statewide initiatives	BEACON
Costs	> $3,000,000

Service and Process Improvement by Re-engineering IT (SPIRIT)

Summary description	PPM ID: PROG.0002 Agency ID: SPIRIT
Problem or opportunity to be addressed	Over time, business units within DOT have become more and more dependent upon Information Technology (IT) services and the IT Infrastructure. Time has also seen an ever-increasing complexity in the technologies in use, making the management of that technology more difficult and frequently more expensive. Taking into consideration, the dependence of business on IT Services and the IT Infrastructure and the increasing complexity, it is vital that IT services meet the current and future needs of the business through IT Service Management (ITSM). Information Technology Infrastructure Library (ITIL) is a vital component of a comprehensive approach to ITSM. Service and Process Improvement by Re-engineering IT (SPIRIT) is DOT's implementation of ITIL.
Major objectives	If IT services and the IT infrastructure are vital to business success, then IT organizations have a compelling need to continually improve how they deliver those services and manage that infrastructure. IT Service Management (ITSM) is the process of managing IT services to effectively and efficiently meet the needs of the Customer. ITSM has three key objectives: (1) to align IT services with the current and future needs of the business and its customers; (2) to improve the quality of the IT services delivered; and (3) to reduce the long-term cost of service provision. 1) Improve Core Service Management Processes through: a. Adopting a proven framework for IT Service Management, the IT Infrastructure Library b. Conducting formal assessments, gap analysis and targeted improvement areas c. Providing formal, certified training at all levels of the organization d. Installing a shared language and standard definitions for Service Management e. Redesigning the documenting core processes f. Implementing redesigned processes to measurably improve service effectiveness and efficiency g. More closely align business needs and IT service delivery 2) Provide transparency to create clear measures of commitment to the customer and closer alignment of business and IT through: a. Clear commitments backed up by well defined service levels b. Measure outcomes that demonstrate performance c. Clearly explained costs and cost factors d. Demonstrate performance as compared against industry peers e. Provide feedback through measuring and reporting customer satisfaction Replace anecdotes with solid metrics as primary service delivery measurement
Approach	Implementing the Information Technology Infrastructure Library (ITIL) processes in the DOT is being accomplished in three phases. The processes selected to be in the first phase are based on the direction set by the State of NC ITS Operational Excellence Program. DOT IT management approved the selection of Change, Incident, Problem, and Service Level Management processes for the first phase of DOT implementation. An ITIL process maturity assessment was completed by Pink Elephant to establish a baseline service level for all of the ITIL processes. IT staff engaged in IT Service Management activities are "foundation certified" in ITIL.
Timeframe	
Major risks	The Service and Process Improvement by Re-engineering IT (SPIRIT) Program will have touch points with the NC ITS Operational Excellence Program. The SPIRIT Program will implement ITIL compliant processes.
Relationship to other department programs	NONE

Relationship to Statewide initiatives	ITS Operational Excellence Program (OEP); ITS ITSM and ITAM project (Remedy) DOT Foundation for Information Technology (FIT);
Costs	> $3,000,000

HB 1779 – Statewide Situs Address / Tax Jurisdiction Database

Summary description	PPM ID: DOT08109 (FY2009 Expansion Request) Agency ID: ITP.00xxx
Problem or opportunity to be addressed	This project will analyze the current process for NC counties in the assignment of tax codes by situs address to registered vehicles for taxing purposes, gather the requirements to create a Statewide Address/Tax Jurisdiction database, design the solution, develop program specifications, and develop the database and associated application (including coding, unit testing, system/integration testing, client testing, volume testing, stress testing, production testing, implementation, and post-implementation) to interface with STARS. This statewide database will be used by STARS to facilitate the calculation of vehicle property taxes for all NC counties.
Major objectives	
Approach	The Collect Vehicle Property Tax Program consists of multiple projects to facilitate the implementation of HB 1779. It will provide centralized coordinated management of these projects to achieve the strategic objectives of HB 1779. The Statewide Situs Address / Tax Jurisdiction Database Project will be simultaneously in-progress with the coding efforts that are determined in the Collect Vehicle Property Tax: Planning to Detail Design project because this will be the most effective and efficient means to implement these projects when considering the whole program. Efficacious efforts will be made to ensure that the program is implemented successfully within the designated time frame and budget.
Timeframe	Project end date 12/31/2011
Major risks	
Relationship to other department programs	NONE
Relationship to Statewide initiatives	NONE
Costs	FY 2009 Expansion Request

Wireless Access Implementation

Summary description	PPM ID: DOT08106 Agency ID: ITP.00141
Problem or opportunity to be addressed	The Secretary of Transportation and other Transportation officials meet regularly in NCDOT conference rooms. The guests often include constituents from outside the department. • The people and business are increasingly dependent on data and technology to properly conduct their business. As such, the business requires secure network access for these constituents and requests wireless access is provided to key points in NCDOT. This includes the Highway Building as well the Chief Engineer's conference room located on Beryl Road. • Currently, guests in the boardroom are required to connect directly to a wired network jack. Those individuals carry their own laptops and computer equipment. That equipment is neither under the control of NCDOT nor under the purview our IT Security staff. This is a risk to our IT Infrastructure in that viruses, worms and other harmful code could be introduced behind our firewalls and could infect production systems.
Major objectives	The sponsor of this improvement is Roberto Canales. • This project aims to provide wireless network access to DOT employees and their guests. • The access shall be secure. • The access shall not allow guests access inside the security perimeter of the NCDOT network.
Approach	IT Infrastructure and Security have consulted with Nortel Networks (already on state contract) to ascertain the cost, schedule, hardware and infrastructure necessary to complete this project. Nortel will provide an appliance to be placed at CCB that will accept traffic from the wireless access points. Nortel (assisted by DOT Networking team) will install the Wireless Access Points. DOT will provide a Virtual Server to run the Wireless Management Console.
Timeframe	Project end date 10/17/2008
Major risks	• The business units will control the issue of temporary passwords to guests at their facility.
Relationship to other department programs	NONE
Relationship to Statewide initiatives	NONE
Costs	$100,000 - $500,000

A full listing of all projects and matching to the NCDOT Goals can be found in Appendix B.

A listing of project completed in fiscal year 08 and later can be found in Appendix C.

IT Governance

In order to improve internal communication and the project approval process, Information Technology initiated a process improvement team with representatives from all teams within IT. This group developed a new set of processes that included elements of Governance, Project Management, Architecture, SDLC, and Operations. The first of these processes to be implemented was a modified project review to include architecture components. The Project Review and Architecture Review Board meetings were replaced by the **information Technology Advisory Group (iTAG)** and **information Technology Executive Management (iTEM).** The iTAG is an advisory group for the iTEM. The iTAG reviews topics and provides approval recommendations to the iTEM. The iTEM reviews these recommendations and either approves or rejects these recommendations from the iTAG. Once projects are approved by the iTEM and if they meet the threshold, the projects will then be sent to the Statewide IT approvers, including the SCIO's Enterprise Project Management Office (EPMO).

In early 2007, Information Technology instituted an IT Planning Council consisting of the DOT senior management. Meetings for this group were suspended during the organizational assessment conducted by McKinsey in April 2007. This council will review business cases for IT projects and determine which projects will be initiated. The Transformation Management Team has endorsed the re-formation of this IT Planning Council as the Strategic Management Committee.

The Strategic Management Committee (SMC) will be responsible for developing the strategic direction for the Department. The SMC will be chaired by the Chief Operating Officer (COO) and has representation from all the deputy secretaries. A new Governance Office, reporting to the COO) will be responsible for providing oversight of the implementation of strategic initiatives approved by the Strategic Management Committee. This oversight will be accomplished through the active involvement, monitoring and reporting of delivery status to the Strategic Management Committee. Strategic initiatives in the area of Leadership Development, Talent Strategy and Information Technology are three known areas that will be reviewed by the Strategic Management Committee.

IT Financial Summary

Over the last five years, the budget for Information Technology (IT) has decreased from $120M (?) to $85M. This was accomplished by (1) transition from a contractor based organization to a state employee based organization and (2) reduction in the number and cost of the IT contracts with third party vendors.

IT receives its operating funds from several sources. IT is responsible for several cost centers that provide a majority of IT funds. These funds come directly from the NC Legislature (administrative funds) and the other funds are from field (construction project) cost centers. IT also receives monies from grants through the Division of Motor Vehicles. For IT projects, the project sponsor might be required to provide all or a portion of the funds necessary to complete the project.

IT Architecture

Over the last seven years, Information Technology has made a significant investment in the SAP Enterprise Resource Planning (ERP) technology. This will be come the basis for all large system development initiatives. This follows the SAP implementation of State's BEACON HR/Payroll and the initiation of the State's BEACON Financial Project. The SAP Portal will become the platform for all intranet development.

IT will continue to develop applications in other environments outside of the SAP ERP technology. The Microsoft .NET and Java JBOSS will continue to standardize the distributed development environments. The mainframe (hosted by the NC Office of Information Technology Services (IT) will also play a major role for our Division of Motor Vehicle (DMV) systems.

IT Services and Processes

Information Technology has initiated a program to implement the IT Service Management best practices known as the Information Technology Infrastructure Library (ITIL), along with the adoption of Project Management methodologies.

The SPIRIT program is DOT Information Technology's implementation of ITIL. In the first phase of SPIRIT, IT tackled four ITIL (v2) process:

1. Incident Management
2. Problem Management
3. Change Management
4. Service Level Management

The planning and design activities for the four processes have completed and will be implemented with DOT's go-live with the ITS Remedy service. DOT has identified the ITIL processes for the second phase of SPIRIT, but maybe put on hold with phase three of the SCIO IT Consolidation program.

The SPIRIT program and process documentation can be found on the DOT internal portal.

IT Infrastructure

Due to the large number of applications in the DOT IT portfolio, we have 200+ servers within data centers in Raleigh. Many of these servers are aging and are in need of replacement, with little or no funding allocated to perform this task. In the most recent legislative session, DOT IT was allocated $1M for server consolidation and refresh. We will seek advice from experts as to the most effective way to consolidate to smaller and faster hardware when replacing this aging hardware. As part of this analysis, we will look at the application portfolio to determine opportunities for consolidation of infrastructure, thus reduce the number of servers needed.

In the spring of 2008, the Secretary of Transportation received a letter from the State Budget Officer David McCoy and State Chief Information Officer stating that DOT Information Technology would be included in phase III of IT consolidation. Meetings are on-going to discuss the size and scope of the infrastructure services within DOT Information Technology that will be included in the consolidation. Phase III of consolidation project is in planning, with implementation starting January 2009 and completing near the end of calendar year 2009.

IT Human Capital Management

Information Technology is lead by the Chief Information Officer (CIO) and this position reports to the DOT Chief Operating Officer (COO) and has six (6) direct reports (see Figure 1 below). IT currently has approximately 563 full-time equivalents (FTE), broken down into 414 state employees (including temporaries) and 149 contract staff.

For the last several years, DOT IT has relied heavily on the supplemental staffing contract. Of the 450+ FTEs in DOT IT before 2005, nearly one-half of them were contractors. Starting in the fall of 2004, the Chief Information Officer (CIO) secured 158 state employee positions to assume the roles of contractors to realize savings. These "contractor conversions" positions addressed current ongoing initiatives performed by DOT IT and <u>not</u> future resource needs.

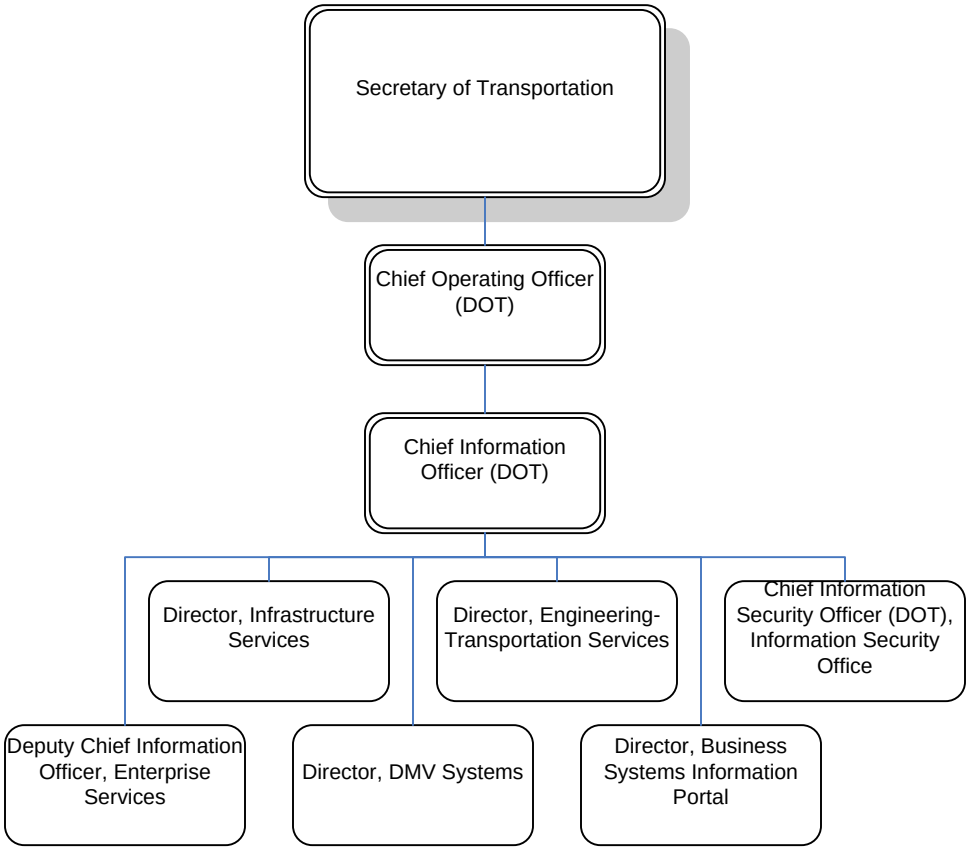


Figure 1 : Information Technology Organization (high level)

Branches within Information Technology

Enterprise Services

The purpose of Enterprise Services (ES) is to direct commonality of project disciplines across projects and provide a central vehicle for monitoring and reporting project status at an enterprise level. ES also provides tools and quality assurance for application development and other IT projects.

- Project Management Office (PMO) provides portfolio management including strategic planning for all IT services. The PMO also provides enterprise standards and best practices including the creation, maintenance and adherence to the technical and application architecture, leverages technology by researching, implementing and enhancing applications and tools, and supports project management by facilitating project teams.

- Software Testing and Performance (STP) supports management in their efforts to deliver applications and technical infrastructure that meets the NCDOT business strategy. A primary focus is to move the organization to a place where:
    - IT project teams maintain a high degree of professional discipline and use their skills to bring high value to their customers
    - IT staff are tightly focused in their use of technology to drive projects to a successful conclusion
    - Critical information about every key project is available to all who need it

- IT Administration Team is tasked with providing proactive fiscal and administrative division support to over 260 Information Technology specialists who are augmented by over 200 contractual personnel. The team is responsible for the organization and supervision of IT's fiscal and budget operations, personnel administration, purchasing, facilities management, and fixed assets.

Infrastructure Services

The primary purpose of the Infrastructure Services (IS) Unit is to enable our customers to perform their job responsibilities effectively and efficiently by providing high quality infrastructure, desktop and network support to the DOT business promptly and accurately. The Infrastructure Services Unit is divided into seven different teams to provide these services.

- IS Architecture is responsible for creating and maintaining an Architecture Management process and strategy that will enable DOT-IT to meet our customer's future needs quickly and efficiently.

- IS Datacenter and Build Services is responsible for establishing and maintaining a Best-in-Class computing operations environment aligned to DOT-IT business needs, driven by a common strategy, processes, procedures, templates, and services that meet DOT business requirements.

- IS Network Services provides reliable, cost effective and secured network services that meets business requirements.

- IS Operations Management provides a service to DOT customers for deploying and overseeing the DOT-IT Service Desk, and providing Incident & Problem Management by ensuring timely restoration of service and eliminating repeatable incidents. This team oversees the Availability of DOT services and ensures Operation Level Agreements (OLA) and performing suppliers are performing within Service Desk Service Level Agreements (SLA).

- IS Production Control is responsible for raising internal and external customer-perceived service levels by eliminating business disruptions due to changes to system components or operating practices. This team is responsible for simplifying and standardizing the processes for Change, Release, Asset, Configuration, and Capacity Management, while managing risk through IT Continuity Management and planning for Disaster Recovery.

- IS Program Office is responsible for improving the customer perception and satisfaction by improving project execution and delivery, to ensure that our customers are able to competently perform their jobs and reach their full potential. This team will work to ensure that on-going operations are not adversely impacted while implementing and integrating new technology.

- IS Technical Services is responsible for providing our customers with the best possible service by being dependable, responsive and by taking ownership of each customer's service request as well as managing the delivery and deployment of IT commodity products and services to end users.

DMV Systems Services

DOT-IT Driver Systems supports the NCDOT/ DMV Driver License Section and other sections within DMV under Driver License Section supervision. In addition to the sections within NCDOT/DMV, Driver Systems also provides support for many different agencies and organizations. These agencies and organizations are supported through the following Driver Systems sub-systems:

- *Crash/TEAAS/TRCS* This system tracks and analyzes motor vehicle accident reports. The purpose of doing this is to 1) report to the federal and State agencies the cause of accidents for statistical purposes and policy development and 2) provide this information to the traffic engineering groups so that engineering can make changes to roadways, signs, and traffic patterns to provide a higher level of safety for the public.

- *Enforcement Systems* Enforcement Systems deal with the enforcement of highway rules and regulations as well as motor vehicle property rights related to such things as abandoned vehicles. Included in this group of systems are the management of Fuel Tax

and vehicle emissions testing and certification.

- *Emissions Systems*
  The North Carolina Electronic Transmission System (NCETS) is the automation of various aspects of General Statute Chapter 20 - Motor Vehicles, Articles 3A titled "Safety and Emissions Inspection Program." The NCETS, which is used by the DMV License and Theft Bureau, facilitates the management of all facets of the Emissions Program: stations, technicians, inspection records, inspection equipment (analyzers), stickers, violations, civil penalties, hearings, suspensions and revocations.

- *Motor Carrier Services* Motor Carrier Services deals primarily with the registration and collection of registration fees from the trucking industry. Registration fees are collected by the States where travel occurs rather than in the State of registration. This group of systems also deals with safety issues such as truck weight, truck safety records, and inspection reports.

- *State Automated Drivers License System (SADLS)*
  SADLS was designed and built to provide the DMV Driver License Section with an automated solution for the issuance of North Carolina driver licenses and id cards, and for the efficient and consistent adjudication of North Carolina citizens convicted of moving violations and traffic offenses.

- *State Titling and Registration System*
  Support the North Carolina Division of Motor Vehicles (DMV) business objectives through the management of information related to the State Titling and Registration System (STARS) by providing professional project management and technical expertise in a stable, state of the art environment.

Engineering-Technology Services

Engineering Transportation Systems provides a wide range of services to the Department of Transportation and includes 4 major units:

- *Geographic Information Systems (GIS) Unit*
  The GIS Unit provides geographic information system (GIS) services, map products, and roadway information to all units of NCDOT in support of planning, design, construction, and maintenance of transportation facilities. The Unit strives to provide and maintain a comprehensive road configuration and attributed digital database. The Unit also partners with other state, regional, and local agencies to build a statewide digital spatial database.

- *Engineering Application Services*
  The Engineering Application Services (EAS) Branch supports NCDOT engineers in the planning, design, construction, and maintenance of North Carolina's state maintained transportation system. They work to improve the design, implementation, operation, and maintenance of CADD (Computer Aided Design and Drafting), large

format plotting, and visualization systems throughout the NCDOT. They research and evaluate new technology that could be adopted to improve performance of these complex systems. Engineering Application Services is a customer driven organization whose effectiveness is measured by the success of its clients.

- *Engineering Applications Development*
  The primary purpose of the Engineering Application Development Unit is to provide IT support to the Division of Highways and others as needed. This IT support includes application and system development, development and integration of existing and proposed COTS systems in order to automate the processes of NCDOT. Through this support, we strive to achieve the most productive and efficient environment for engineers and other professionals throughout the organization.

- *Transportation Application Development*
  The Transportation Applications Development Group provides operational support and enhancement activities for several systems, including SPECS, MMS, and PMS.

Business Systems Information Portal

The Business Systems Information Portal (BSIP) is an Enterprise Resource Planning (ERP) system that utilizes the SAP R/3 software. The primary business goal of BSIP is to improve processes and information within the NCDOT. This system tracks and records the billions of dollars that are spent on construction projects, as well as ensures accountability for the federal reimbursements and other grants awarded to NCDOT.

Information Security Office

The primary purpose of the Information Security Office (ISO) in Information Technology is to preserve the confidentiality, availability, and integrity of information assets in NCDOT at a level appropriate to the value of assets and the risks to their security.

The ISO accomplishes such preservation through the following:

- The development and communication of policies, standards, and procedures
- The assessment of risk and the recommendation of adequate compensating controls for that risk
- Leadership in the analysis of criticality and risk in and planning for the continuity of information technology services in business lines
- Consultation in the implementation of operational security controls
- Audit of the application of policies, standards, and procedures

The ISO also represents IT to the Office of Information Technology Services (ITS) and other external entities in matters involving information security.

Skills and Development

In order for Information Technology to be effective and efficient, every employee needs to be trained appropriately. The TMT program has made training, along with recruiting and retaining employees, one of the key strategic initiatives, especially when it comes to leadership development.

Meanwhile, many DOT IT employees have attended *ITIL* training provided by ITS. As DOT IT moves into our own implementation, most employees will be required to take the *ITIL* foundation class and others will take practitioner level classes (i.e. Service Level Management, Change Management, etc). For future implementations of the *ITIL* process, DOT IT will work closely with ITS to adopt and/or develop similar processes and procedures.

IT Risk Management

The Chief Information Security Office (CSIO) was hired in August 2006 and now reports directly to the Chief Information Officer. In the spring of 2007, the CSIO initiated a security audit of the Department of the Security posture using a contract provided by the Office of State Auditor. The audit specifically targeted the following items:

- Network Vulnerability, which provides a thorough understanding of security-related weaknesses and exposes in the DOT network. The vulnerability tests were conducted "against" specific DOT locations and our SAP/Citrix Servers (hosted by ACS).
- Application Penetration, which provides insight into the methods of attack against an application and presents a reasonable example of what an attacker might be able to accomplish. Penetration tests were conducted against the MaPS-based applications (hosted by NC Office of Information Technology Services) and Viisage (Driver License Image) application.
- Wireless Site Assessment, which reviews the security configuration of deployed wireless infrastructure.

The Chief Information Security Officer used the results of the security audit to implement corrective actions and improve security within the Department. Along with these improvements, the CISO reviews the security aspects of projects as they come though the iTAG and iTEM governance groups. The CISO continues to work with the DOT Disaster Preparedness groups and will work closely with the new DOT Office of Inspector General on security incidents.

Appendices

Appendix A – NCDOT Vision-Mission-Goals-Values

NCDOT 21st Century vision:

- Focus on network connectivity and function, not just projects
- Enhance systems operations, to leverage existing infrastructure
- Establish network performance standards
- Greater
  - Internal Efficiency
  - Ownership
  - Accountability
- Prioritized, outcome-based budgets
- Link infrastructure delivery and statewide commerce goals
- Culture shift, become true service provider

NCDOT mission:

Connecting people and places in North Carolina – safely and efficiently, with accountability and environmental sensitivity

NCDOT five (5) goals:

- Make our transportation network SAFER
- Make our transportation network move people and goods more EFFICIENTLY
- Make our infrastructure LAST LONGER
- Make our organization a place that WORKS WELL
- Make our organization a GREAT PLACE to work

NCDOT five (5) values:

- SAFETY – We strive safety throughout our transportation networks as well as in our work and our daily lives
- CUSTOMER SERVICE – We respond to our customers, both internal and external, in a open, professional and timely manner.
- INTEGRITY – We earn and maintain trust by responsibly managing the states assets, acting ethically, and holding ourselves accountable for our actions
- DIVERSITY – We draw strength from our differences and work together in a spirit of teamwork and mutual respect
- QUALITY – We pursue excellence in delivering our projects, programs, services and initiatives in an environmentally sensitive manner

Appendix B – Information Technology Goal Project listing

Active Projects by Goals

Goal / Associated Program / Project Number	Project Name	Director	Project Manager	Status	Project Cost Type	Project to Goal Metric	Percentage
Make our transportation network safer			**SAFER**				
ITP.00042	Automated Testing System	Bergman	Patrick Bohmer	Active	SCIO	0	100.00%
ITP.00062	Notice, Storage & Theft System	Bergman	Cheryl Leach	Active	SCIO	0	100.00%
ITP.00069	IRP/MC and Lites Migration	Bergman	Mike Thomas	Active	SCIO	0	50.00%
ITP.00088	TIMS - Geocode Incidents	Winn	John Farley	Active	PMO Lite	0	50.00%
ITP.00096	Emissions Services	Bergman	Cheryl Leach	Active	PMO	0	100.00%
ITP.00101	DMV Driver Report Services	Bergman	Doug Haynes	Active	PMO Lite	0	100.00%
ITP.00114	Communication on Accreditation for Law En	Bergman	Cheryl Leach	Active	PMO	0	50.00%
ITP.00122	DMV-IRP Quebec Axles Request	Bergman	Mike Thomas	Active	PMO	0	100.00%
ITP.00144	TRS-Safety Data Quality	Bergman	Susan Mitchell□Cornelia Kensak	Active	PMO	0	100.00%
ITP.00152	Centralized Issuance Lite	Bergman	Patrick Bohmer	Active	PMO	0	100.00%
PROG.0003							
ITP.00044	Driver License Digital Imagery System	Bergman	Patrick Bohmer	Active	SCIO	0	100.00%
PROG.0006							
ITP.00139	UCR Unified Carrier Registration - Phase 1	Bergman	Mike Thomas	Active	PMO	1	100.00%
PROG.0007							
ITP.00146	IRP Audit Stop Project	Bergman	Mike Thomas	Active	PMO	0	100.00%
ITP.00149	STARS-IRP/MC Audit Stop Interface	Bergman	Srinivasarao Kandimalla	Active	PMO Lite	0	100.00%

Goal	Key Word						
Associated Program							
Project Number	Project Name	Director	Project Manager	Status	Project Cost Type	Project to Goal Metric	Percentage
Make our transportation network move people and good more effici			**MORE EFFICIENT**				
ITP.00060	Enterprise Spatial Database Prototype	Winn	John Farley	Active	PMO Lite	0	100.00%
ITP.00066	NCSmartlink	Winn	David Alford	Active	SCIO	0	100.00%
ITP.00088	TIMS - Geocode Incidents	Winn	John Farley	Active	PMO Lite	0	50.00%
ITP.00089	Linear Referencing System v1.1	Winn	Jun Wu	Active	PMO Lite	0	100.00%
ITP.00092	Fleet Documetation Project	Thomas	Tim Frost	Active	SCIO	0	100.00%
ITP.00109	MMS Field Data Capture	Winn	Bill Ritchie	Active	SCIO	0	100.00%
ITP.00126	Geotech Subsurface Database	Winn	John Farley	Active	PMO Lite	0	100.00%
ITP.00153	NC 511 Telephony System	Need to assign□P		Active	SCIO	0	50.00%
ITP.00154	ARID (Attribute Road Inventory Data) Tool	Winn	Ju Wu	Active	PMO	0	50.00%

Goal	Key Word						
Make our infrastructure last longer	**LAST LONGER**						
Associated Program							
Project Number	*Project Name*	*Director*	*Project Manager*	*Status*	*Project Cost Type*	*Project to Goal Metric*	*Percentage*
ITP.00035	Pavement Management System-Phase 2	Winn	Bill Ritchie	Active	SCIO	0	100.00%
ITP.00078	Secondary Roads Common Data	Winn	John Farley	Active	PMO Lite	0	100.00%
ITP.00109	MMS Field Data Capture	Winn	Bill Ritchie	Active	SCIO	0	100.00%
ITP.00154	ARID (Attribute Road Inventory Data) Tool	Winn	Ju Wu	Active	PMO	0	50.00%

Goal			Key Word				
Associated Program							
Project Number	Project Name	Director	Project Manager	Status	Project Cost Type	Project to Goal Metric	Percentage
Make our organization a place that works well			WORKS WELL				
ITP.00025	InputAccel Upgrade R5.2	Thomas	Carl Pickney	Active	SCIO	0	100.00%
ITP.00069	IRP/MC and Lites Migration	Bergman	Mike Thomas	Active	SCIO	0	50.00%
ITP.00080	SAP Security System VIRSA	Thomas	Brenda Franks□Joe Kirschner	Active	SCIO	0	100.00%
ITP.00085	Pre-Qual Application Automation	Thomas	Tim Frost	Active	SCIO	0	100.00%
ITP.00087	Oracle 10 Upgrade	Dietz	Don Jerman	Active	PMO	0	100.00%
ITP.00093	ERP 2005 Upgrade	Thomas	Tim Frost	Active	SCIO	0	100.00%
ITP.00102	RFC Management	Dietz	Arlon Kemple	Active	PMO Lite	0	100.00%
ITP.00110	Point of Sale Application	Thomas	Brenda Franks□Marnie Lockard	Active	SCIO	0	100.00%
ITP.00111	Enterprise .NET Environment	Winn	David Alford	Active	SCIO	0	100.00%
ITP.00112	DOT Print Service Upgrade	Need to assign□P		Active	SCIO	0	100.00%
ITP.00113	Wide Area File Feasibility Study	Dietz	Arlon Kemple	Active	PMO Lite	0	100.00%
ITP.00114	Communication on Accreditation for Law En	Bergman	Cheryl Leach	Active	PMO	0	50.00%
ITP.00117	Time Sheet Assistance	Thomas	Tim Frost	Active	PMO Lite	0	100.00%
ITP.00121	Title VI - Compliance Audit Tool	Thomas	Carl Pickney	Active	PMO	0	100.00%
ITP.00123	DMV Revenue/SAP Accounting Sys Integra	Thomas	Diane Daniel	Active	PMO	0	100.00%
ITP.00124	NCDOT Rail Project	Thomas	Andy Brannan	Active	PMO	0	100.00%
ITP.00127	DMV Enterprise IP Telephony Migration	Thomas	Tess King	Active	SCIO	0	100.00%
ITP.00128	Image Plus Retirement Study	Thomas	Carl Pickney□Bryan Fazekas	Active	PMO	0	100.00%
ITP.00131	Lites Civil Penalty Revision for SB881	Bergman	Mike Thomas	Active	PMO	0	100.00%
ITP.00134	Capture USDOT number project	Bergman	Srinivasaro Kandimalla	Active	PMO Lite	0	100.00%
ITP.00135	Special Vehicle Replica Project	Bergman	Jeff Martin	Active	PMO Lite	1	100.00%
ITP.00136	NCDOT Email Upgrade Coordination	Dietz	Tess King	Active	SCIO	7	60.00%
ITP.00140	VPN Access Implementation	Winn	David Alford	Active	PMO	0	100.00%
ITP.00141	Wireless Access Implementation	Dietz	David Alford	Active	PMO	0	60.00%
ITP.00142	LDRPS V10.2 Implementation	Hulsey	Yuji K. Smith	Active	PMO Lite	0	100.00%
ITP.00145	TRS - User Management Module	Bergman	Susan Mitchell□Cornelia Kensak	Active	PMO	0	100.00%

Goal	Key Word						
Associated Program Project Number	Project Name	Director	Project Manager	Status	Project Cost Type	Project to Goal Metric	Percentage
ITP.00147	STARS Lites Penalties Revisions (SB881)	Bergman	Srinivasarao Kandimalla	Active	PMO Lite	0	100.00%
ITP.00148	Watchfire	Thomas	James Merricks	Active	PMO	0	100.00%
ITP.00151	Title VI - Audit Web Application	Thomas	Carl Pickney	Active	PMO	0	100.00%
ITP.00153	NC 511 Telephony System	Need to assign□P		Active	SCIO	0	50.00%
ITP.00155	WDS (Wide-area Data Services) Deployme	Dietz	Jim Niver	Active	SCIO	0	100.00%
ITP.00156	Remittance Processing	Bergman	Ravi Shanmugam	Active	PMO Lite	0	100.00%
ITP.00157	APM FY0809 Annual Update	Hulsey	Cheryl Ritter/Mark Goodwin	Active	PMO Lite	0	100.00%
ITP.00158	Work Center Cleanup	Hulsey	Cheryl Ritter/Mark Goodwin	Active	PMO Lite	0	100.00%
ITP.00159	Build FY0809 ITS Structures	Hulsey	Cheryl Ritter/Mark Goodwin	Active	PMO Lite	0	100.00%
PROG.0002							
ITP.00084	DOT SPIRIT (OEP)	Hulsey	Forrest Robson	Active	SCIO	9	60.00%
ITP.00104	SPIRIT Change Management	Hulsey	Forrest Robson	Active	SCIO	10	60.00%
ITP.00105	SPIRIT Incident Management	Hulsey	Forrest Robson	Active	SCIO	10	60.00%
ITP.00106	SPIRIT Problem Management	Hulsey	Forrest Robson	Active	SCIO	10	60.00%
ITP.00107	SPIRIT Service Level Management	Hulsey	Forrest Robson	Active	SCIO	10	60.00%
PROG.0003							
ITP.00138	Drivers License Legacy Retrofit	Bergman	Patrick Bohmer□Eric Lingerfelt	Active	SCIO	0	100.00%
PROG.0004							
ITP.00129	Tax Collection - Detailed Design for HB177	Bergman	Maggie Thomas	Active	SCIO	1	100.00%
ITP.00132	Acquire Tech Writer for HB1779	Bergman	Maggie Thomas□Bruce Collins	Active	PMO	1	100.00%
PROG.0005							
ITP.00133	STARS E- Inspection Stickers	Bergman	Mike Farmer	Active	SCIO	0	100.00%
ITP.00137	EMISSIONS E-Inspection Stickers	Bergman	Cheryl Leach	Active	PMO	1	100.00%
ITP.00143	VERIZON E-Inspection Stickers	Bergman	Cheryl Leach	Active	SCIO	0	100.00%
PROG.0006							
ITP.00150	DMV Unified Carrier Registration - Phase 2	Bergman	Mike Thomas	Active	PMO	0	100.00%

Goal / Associated Program	Project Number	Project Name	Director	Project Manager	Status	Project Cost Type	Project to Goal Metric	Percentage
Make our organization a great place to work				**GREAT PLACE**				
	ITP.00136	NCDOT Email Upgrade Coordination	Dietz	Tess King	Active	SCIO	7	40.00%
	ITP.00141	Wireless Access Implementation	Dietz	David Alford	Active	PMO	0	40.00%
PROG.0002								
	ITP.00084	DOT SPIRIT (OEP)	Hulsey	Forrest Robson	Active	SCIO	9	40.00%
	ITP.00104	SPIRIT Change Management	Hulsey	Forrest Robson	Active	SCIO	10	40.00%
	ITP.00105	SPIRIT Incident Management	Hulsey	Forrest Robson	Active	SCIO	10	40.00%
	ITP.00106	SPIRIT Problem Management	Hulsey	Forrest Robson	Active	SCIO	10	40.00%
	ITP.00107	SPIRIT Service Level Management	Hulsey	Forrest Robson	Active	SCIO	0	40.00%

Appendix C – Information Technology Completed Project listing

-For Fiscal Year 08 and later

Agency Project ID	Project Name	Division	Project Manager	Project Class	Total Act Proj L2 Project Costs	Project Revised Budget Project Costs	Project Revised Budget O and M Costs	Project Revised Budget Total Investment Costs	Total Benefits	Actual Start Date	Actual End Date	Planned End Date
ITP.00035	Pavement Management System Project Phase 2 (Implementation)	Engineering	William Ritchie	> $3,000,000	2,705,001	2,722,064	1,822,024	4,544,088	5,185,000	01/02/2005	12/31/2007	12/31/2007
ITP.00064	NC Ferry Feasibility Study	BSIP	Carl Pickney	< $100,000	0	90,000	0	0	0		8/1/2008	
ITP.00072	Bridge Management System Phase I	Engineering	Bill Ritchie	< $100,000	0	75,000	0	0	0		8/1/2008	
ITP.00078	Secondary Roads Common Data	Engineering	John Farley	< $100,000	0	78,500	0	0	0		8/1/2008	
ITP.00079	Geotech Subsurface Viewer	Engineering	John Farley	< $100,000	0	< 100K	0	0	0		8/1/2008	
ITP.00089	Linear Referencing System v1.1	Engineering	Jun Wu	< $100,000	0	81,250	0	0	0		11/00/07	
ITP.00113	Wide Area File Feasibility Study	Infrastructure	Arlon Kemple	< $100,000	74,742	59,000	0	0	0	4/2/2008	8/27/2008	
ITP.00116	Trend Micro AntiVirus Implementation	Infrastructure	Arlon Kemple	$100,000 - $500,000	3,271	0	0	0	0		8/22/2007	
ITP.00117	Time Sheet Assistance	DMV	Tim Frost	< $100,000	0	92,260	0	0	0		8/1/2008	
ITP.00134	Capture USDOT number project	DMV	Srinivasarao Kandimalla	< $100,000	0	0	0	0	0		03/00/08	

ITP.00135	Special Vehicle Replica Project	DMV	Jeff Martin	< $100,000	0	0	0	0	0		8/1/2008	
ITP.00139	DMV Unified Carrier Reg	DMV	Mike Thomas	$100,000 - $500,000	102,881	0	0	162,873	1,860,035	10/15/2007	05/23/2008	05/23/2008
ITP.00140	VPN Access Implementation Pilot	Engineering	David Alford	< $100,000	0	0	0	0	0	2/4/2008	8/1/2008	
ITP.00147	STARS Lites Penalties Revisions (SB881)	DMV	Mike Thomas	< $100,000	0	0	0	0	0	1/28/2008	9/5/2008	